

CLAIMS

1. In a communication network, a method for forwarding data across said network, said method comprising:

assigning a priority level to said data;

selecting said data for data compression responsive to said priority level; and

sending said data through said network.

2. The method of claim 1 further comprising:

compressing said data only if said priority level is below a threshold.

3. The method of claim 1 further comprising:

determining a compression level for said data based on said priority level; and

compressing said data according to said priority level prior to sending said data through said network.

4. The method of claim 3 wherein determining said compression level comprises determining said compression level according to an inverse relationship between said compression level and said priority level so that high priority traffic is favored in allocating bandwidth.

5. The method of claim 1 further comprising:

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determining a compression level for said data based on said priority level and network congestion; and

compressing said data according to said priority level prior to sending said data through said network.

6. The method of claim 5 wherein determining said compression level comprises determining said compression level according to an inverse relationship between said compression level and said priority level so that high priority traffic is favored in allocating bandwidth.

7. The method of claim 1 further comprising;
setting a threshold priority level for compression eligibility based on network congestion; and
compressing said data only if said priority level is below said threshold.

8. The method of claim 1 wherein said priority level corresponds to a quality of service class.

9. The method of claim 1 wherein said data comprises a packet.

10. In a digital communication network, a method for forwarding packets across said network, said method comprising:

providing a data compression system having a variable compression level;

inputting said packets to said data compression system while adjusting said variable compression level for individual ones of said packets responsive to priority level of said packets; and

sending said packets as compressed through said network.

11. In a digital communication network, apparatus for forwarding data across said network, said apparatus comprising:

a compression switch that receives said data and assigns a compression level to said data responsive to a priority level of said data;

a compression system that compresses said data according to said compression level; and

an output interface that forwards said data across said network as compressed by said compression system.

12. The apparatus of claim 11 wherein said compression system assigns said compression level according to an inverse relationship between said compression level and said priority level so that high priority traffic is favored in allocating bandwidth.

13. The apparatus of claim 11 further comprising:

a network congestion estimator that determines network congestion; and

wherein said compression switch assigns said compression level responsive to said network congestion.

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14. The apparatus of claim 11 wherein said data comprises a packet.
15. The apparatus of claim 11 wherein said priority level corresponds to a quality of service class.
16. A computer program product for forwarding data across a network, said product comprising:
 - code that assigns a priority level to said data;
 - code that selects said data for data compression responsive to said priority level;
 - code that sends said data through said network; and
 - a computer-readable storage medium that stores the codes.
17. The product of claim 16 further comprising:
 - code that compresses the data only if said priority level is below a threshold.
18. The product of claim 16 further comprising:
 - code that determines a compression level for said data based on said priority level; and
 - code that compresses said data according to said priority level prior to sending said packet through said network.
19. The product of claim 18 wherein said code that determines said compression level comprises code that determines said compression level according to an inverse

relationship between said compression level and said priority level so that high priority traffic is favored in allocating bandwidth.

20. The product of claim 16 further comprising:

code that determines a compression level for said data based on said priority level and network congestion; and

code that compresses said data according to said priority level prior to sending said data through said network.

21. The product of claim 20 wherein said code that determines said compression level comprises code that determines said compression level according to an inverse relationship between said compression level and said priority level so that high priority traffic is favored in allocating bandwidth.

22. The product of claim 16 further comprising;

code that selects a threshold priority level for compression eligibility based on network congestion; and

code that compresses said data only if said priority level is below said threshold.

23. The product of claim 16 wherein said data comprises a packet.

24. The product of claim 16 wherein said priority level corresponds to a quality of service class.

25. A computer program product for forwarding packets across a network, said product comprising:

code that provides a data compression system having a variable compression level;

code that inputs said packets to said data compression system while adjusting said variable compression level for individual ones of said packets responsive to priority level of said packets;

code that sends said packets as compressed through said network; and

a computer-readable storage medium that stores the codes.

26. In a data communication network, apparatus for forwarding data across said network, said apparatus comprising:

means for assigning a priority level to said data;

means for selecting said data for data compression responsive to said priority level; and

means for sending said data through said network.

27. In a packet switched network, apparatus for forwarding packets across said network, said apparatus comprising:

means for compressing data using a variable compression level;

means for inputting said packets to said compressing means while adjusting said variable compression level for individual ones of said packets responsive to priority level of said packets; and

means for sending said packets as compressed through said network.

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